

Large Scale Cleaning Telescope Mirrors with Electron Beams Project



Completed Technology Project (2010 - 2013)

Project Introduction

The Cleaning Lenses and Mirrored Surface with Electrons is a technology developed to provide access to large lenses and mirror structures and providing a low risk technique for cleaning their surfaces.

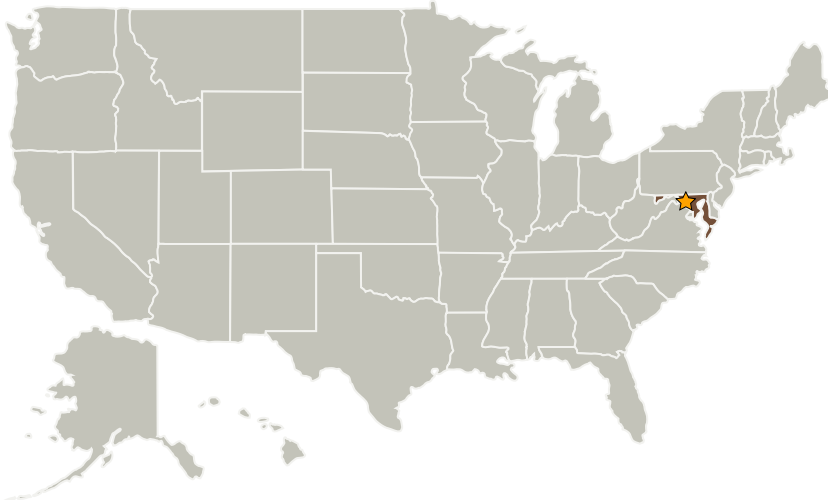
The Cleaning Lenses and Mirrored Surfaces with Electrons tasks include: Development of Fractal Wand Geometries; Vacuum Chamber testing for Fractal Wand Prototypes; and selection of best prototype.

Anticipated Benefits

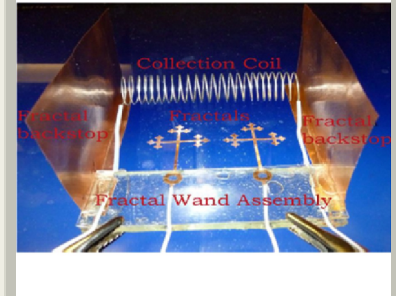
JWST, Micro Shutters, and MMS.

Any mission in the future with lenses and mirrors.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Goddard Space Flight Center (GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland



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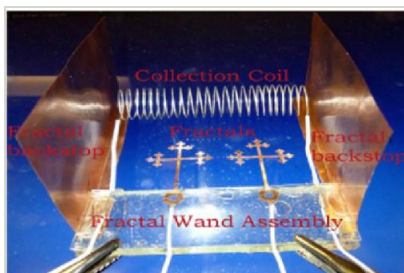
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Primary U.S. Work Locations

Maryland

Images



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Large Scale Cleaning Telescope Mirrors with Electron Beams Project
(<https://techport.nasa.gov/image/3000>)

Project Website:

<http://aetd.gsfc.nasa.gov/>

Organizational Responsibility

Responsible Mission Directorate:

Mission Support Directorate (MSD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Center Independent Research & Development: GSFC IRAD

Project Management

Program Manager:

Peter M Hughes

Project Manager:

Brook Lakew

Principal Investigator:

Fred A Minetto

Co-Investigators:

John G Hagopian
Sharon A Straka

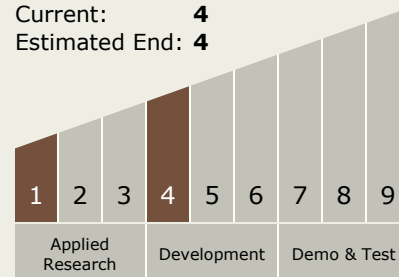
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Technology Maturity (TRL)

Start: **1**
Current: **4**
Estimated End: **4**



Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.2 Observatories
 - └ TX08.2.1 Mirror Systems